

AMENDMENTS TO THE CLAIMS

The following listing of Claims will replace all previous claims in the application:

Listing of Claims:

1. (Previously presented): A system for assisting the regeneration of depollution means associated with oxidation catalyst-forming means, and integrated in an exhaust line of a motor vehicle diesel engine, in which the engine is associated with common rail feed means for injecting fuel into the cylinders of the engine, including at least one post-injection, and adapted, at constant torque, to implement at least two regeneration strategies, at a first level and at a second level, depending on different engine operation control parameters in order to obtain different temperature levels in the exhaust line, the temperature level corresponding to the second level strategy being higher than that corresponding to the first level strategy, the system including acquisition means for acquiring the exothermic temperature level of the catalyst-forming means, comparator means for comparing this exothermic temperature level with a safety threshold for the catalyst-forming means, so that in the event of said threshold value being exceeded while applying the second level strategy, the feed means are controlled to regulate progressively at least one of the engine operation control parameters in such a manner as to reduce the exothermic temperature level of the catalyst-forming means, and if this level does not drop below the threshold value at the end of a first predetermined time period, to control the feed means to switch over to the first level strategy, and if said exothermic temperature level of the catalyst-forming means still does not drop below the safety threshold value at the end of a second period of time, to stop the regeneration strategy; wherein:

the feed means are adapted to implement two successive post-injections;
during regulation, the feed means are adapted to reduce progressively the flow rate of fuel in the second post-injection; and
the feed means are adapted to reduce the flow rate of the second post-injection by using a correction factor lying in the range 0 to 1 and determined on the basis of the difference between the exothermic temperature level and the safety threshold value.

2. (Previously presented): A system according to claim 1, wherein the correction factor is determined by a PI type regulator having non-linear gain.

3. (Currently amended): A system according to claim 1, wherein the acquisition means for acquiring the exothermic temperature ~~comprise~~ comprises two temperature sensors, one placed upstream and the other placed downstream from the catalyst-forming means.

4. (Previously presented): A system according to claim 1, wherein the engine is a diesel engine associated with a turbocharger.

5. (Previously presented): A system according to claim 1, wherein the value of the safety threshold is calibratable.

6. (Currently amended): A system according to claim 1, wherein the depollution means

~~comprise~~ comprises a particle filter.

7. (Withdrawn - Currently amended): A system according to claim 1, wherein the depollution means comprises ~~comprise~~ a NOx trap.

8. (Withdrawn - Currently amended): A system according to claim 1, wherein the depollution means comprises ~~comprise~~ a SOx trap.

9. (Currently amended): A system according to claim 1, wherein the depollution means comprises ~~comprise~~ an oxidation catalyst.

10. (Previously presented): A system according to claim 1, wherein the fuel includes an additive for being deposited together with the particles of which it is mixed on the depollution means in order to facilitate regeneration thereof.

11. (Previously presented): A system according to claim 1, wherein the fuel includes an additive forming a NOx trap.